ranslation Transport



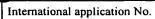
# **PCT**

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 9950	FOR FURTHER ACTI	OR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)				
nternational application No. PCT/DE99/03474	International filing date (a 02 November 1999)					
international Patent Classification (IPC) or C23G 1/36	national classification and II	PC				
Applicant EILENBURGEI	R ELEKTROLYSE- UI	ND UMWELT	TECHNIK GMBH			
This international preliminary ex Authority and is transmitted to the	camination report has been applicant according to Artic	prepared by this ele 36.	International Preliminary Examining			
2. This REPORT consists of a total of 4 sheets, including this cover sheet.						
This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).						
These annexes consist of a total of sheets.						
3. This report contains indications relating to the following items:						
I Basis of the rep	ort	•				
II Priority	II Priority					
III Non-establishm	nent of opinion with regard to	o novelty, inventive	e step and industrial applicability			
	Lack of unity of invention					
V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement						
VI Certain documents cited						
VII Certain defects in the international application						
VIII Certain observations on the international application						
Date of submission of the demand		Date of completion of this report				
30 May 2000 (30	0.05.00)	29 5	September 2000 (29.09.2000)			
Name and mailing address of the IPEA/EP		Authorized office	ı			
		Telephone No.				





### PCT/DE99/03474

I. Basis of the report							
1. This report has been drawn on the basis of (Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.):							
	the international	application as originally filed					
$\boxtimes$	the description,	pages1-9	, as originally filed,				
		pages	, filed with the demand,				
		pages	, filed with the letter of				
$\boxtimes$	the claims,	Nos. 1-15	, as originally filed,				
		Nos	, as amended under Article 19,				
			, filed with the demand,				
			, filed with the letter of,				
		Nos	, filed with the letter of				
$\boxtimes$	the drawings,	sheets/fig1/1	, as originally filed,				
		sheets/fig					
			, filed with the letter of,				
			, filed with the letter of				
2. The amend	lments have result	ed in the cancellation of:					
		pages					
	the claims,	Nos					
<b>i</b> i	the drawings,	sneets/fig	_				
3. This	report has been e	stablished as if (some of) the	amendments had not been made, since they have been considered				
to g	o beyond the discl	osure as filed, as indicated in	the Supplemental Box (Rule 70.2(c)).				
4. Additional	observations, if n	ecessary:	1.73				
	,	•	13				
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1							

### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

nternational application No.
PCT/DE 99/03474

v.	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
	citations and explanations supporting such statement

1.	Statement			
	Novelty (N)	Claims	1-15	YES
	Hovely (14)	Claims		NO
	Inventive step (IS)	Claims _	1-15	YES
				NO
		Ciamis	1-15	
	Industrial applicability (IA)	Claims	1-10	YES
		Claims		NO

#### 2. Citations and explanations

Although pickling solutions based on sulphuric acid with the addition of iron (III) sulphate as an oxidising agent are known per se (see, for example, US-A-2 318 559 or EP-A-0 794 269), none of the documents cited in the international search report discloses a recycling pickling process using an iron (III) sulphate additive followed by copper regeneration in an electrolytic cell. The known processes involve the addition of  $Cr_2(SO_4)_3$  with sulphuric acid, or with iron (III) chloride but without sulphuric acid (US-A-3 761 369 or EP-A-0 396 984), or without iron (III) sulphate but with peroxide sulphates. Such a process is disclosed in DE-A 195 06 832, which is considered to be the closest prior art. In comparison with the said prior art, the invention according to Claim 1 of the present application has the advantage that the same pickling results can be achieved with smaller quantities of peroxide sulphates or none at all, which means that decomposition losses are slight and higher yields can be obtained. Moreover, the range of uses is increased because the same process can be used to obtain very different redox potentials, and hence for the first time it is possible to pickle copper and various copper alloys using a pickling solution of the same basic composition. The application therefore meets the requirements of PCT Article 33(2)-(4).